# APPROACH LENGTH OF NEED IN CUT SECTIONS

FIGURE: 8–M

BDC13MR–04

Where an obstruction is encountered in a cut section and it is to be shielded with guide rail, it is desirable that the length of need (L.O.N.) end at the PVI, See Figure 8–N. In order to accomplish this, the length of guide rail (L_1) parallel to the PVI must be obtained. The following example shows how the L.O.N. is computed:

EXAMPLE
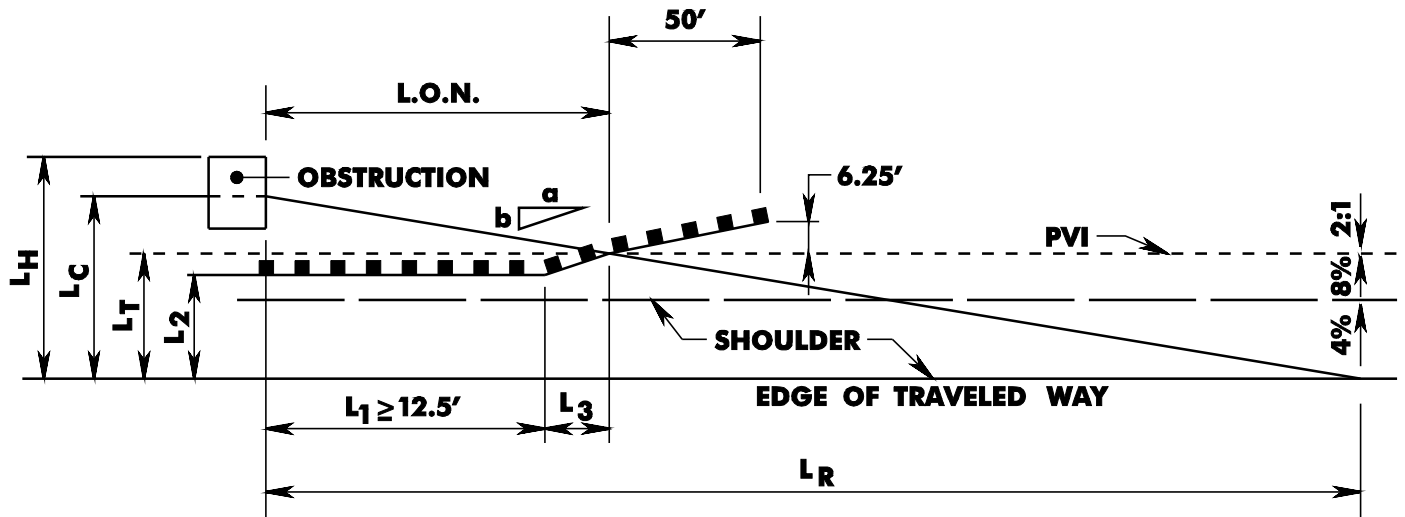
V = 60 M.P.H.

A.D.T. = 6,000

L_2 = 16 FEET

L_H = 32 FEET

L_R = 250' (FROM FIGURE 8–E, TABLE–1)

L_T = 19 FEET

a/b = 14:1 STRAIGHT FLARE (FROM FIGURE 8–E, TABLE–1)

L_C = 30 FEET (FROM FIGURE 8–A, L_C = 26' TO 30') FOR 8% FILL SLOPE

IF $L_H > L_C$ USE L_C IN FORMULA BELOW, IF $L_H < L_C$, REPLACE L_C WITH L_H IN FORMULA BELOW

$L_1 = L_R - (L_R L_T / L_C) - a/b (L_T - L_2)$

$L_1 = 250 - (250 \times 19/30) - 14/1 (19 - 16) = 49.7'$

49.7'/6.25' POST SPACING = 7.95 POSTS, THEREFORE, USE 8 POSTS AT 6.25' = 50.0 FT. = L_1

FLARE LENGTH $L_3 = (L_T - L_2) a/b = (19 - 16) 14/1 = 42$ FT.

42'/6.25' POST SPACING = 6.72 POSTS, THEREFORE, USE 7 POSTS AT 6.25' = 43.75 FT. = L_3

L.O.N. = 50.0 FEET + 43.75 FEET = 93.75 FEET

FROM TABLE 1, FIGURE 8–D MINIMUM RECOVERY AREA = 75'

SINCE L.O.N. IS GREATER THAN 75', USE L.O.N. = 93.75'